



Neonatal Group B Streptococcal Disease: Guidelines for Prevention

- A plan for preventing neonatal GBS disease should be conveyed to all women by every obstetrical practice during prenatal care visits.
- Either of two strategies can be followed for selecting women for intrapartum chemoprophylaxis:
 - women in preterm labor (<37 weeks gestation) or with prolonged rupture of membranes (≥ 18 hours) or with fever in labor (≥ 38.0 deg. C) regardless of colonization status, **or**
 - women in preterm labor (<37 weeks gestation) or identified as colonized with GBS through rectovaginal screening at 35-37 weeks gestation (with or without labor risk factors).
- Regardless of which strategy is used, all women with GBS bacteriuria or with a previous infant with GBS disease should also receive intrapartum chemoprophylaxis.
- Routine use of prophylactic antimicrobials for infants born to mothers who received intrapartum prophylaxis is not recommended.

Figures 1 and 2 show the two strategies for selecting women for intrapartum chemoprophylaxis.

Table 1 provides the procedures for detecting colonization in pregnant women.

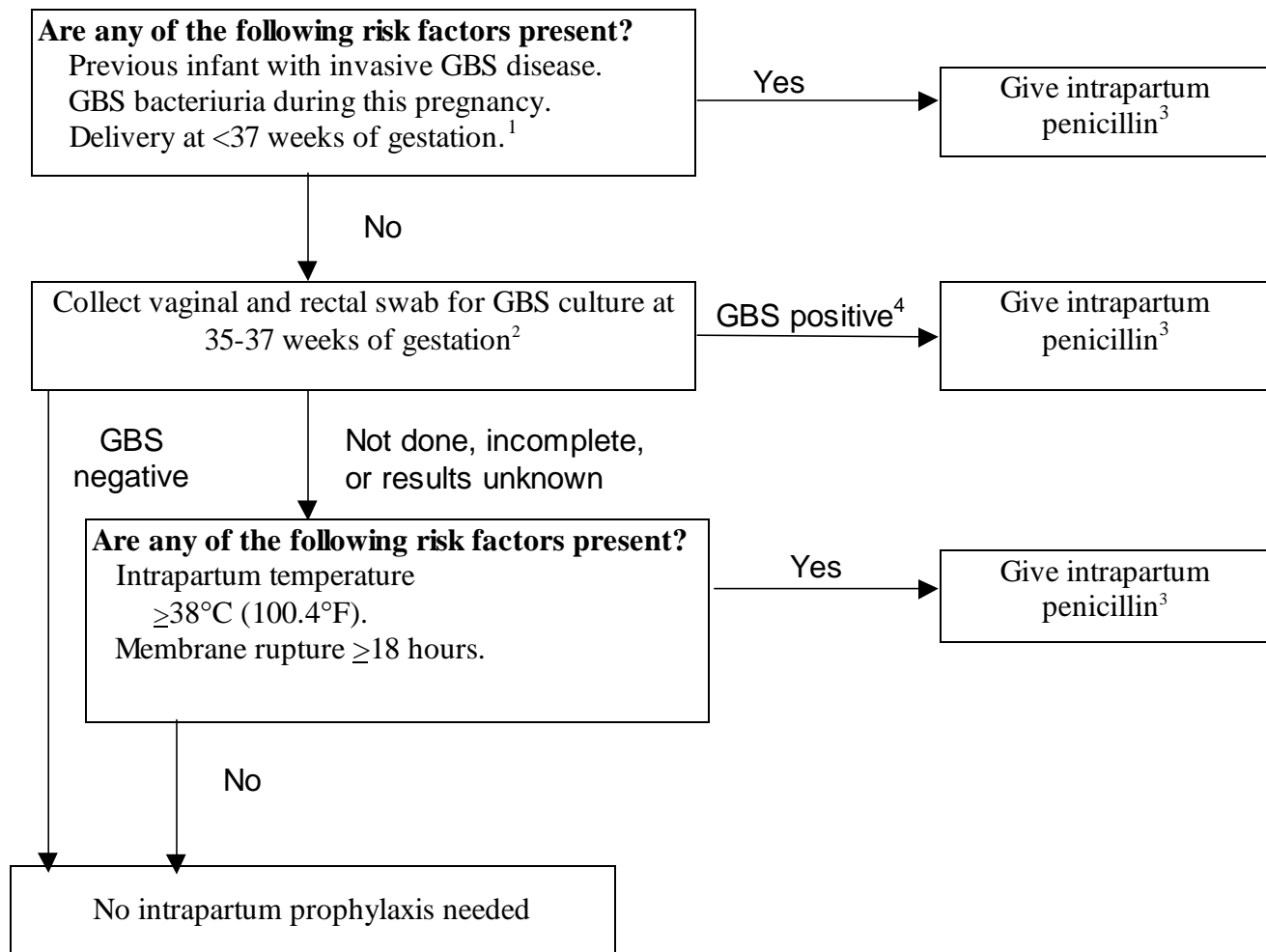
Table 2 lists the recommended regimens for intrapartum antimicrobial prophylaxis.

Figure 3 shows an algorithm for clinical care that could be used for infants of mothers who received intrapartum chemoprophylaxis.

References

1. CDC. Prevention of perinatal group B streptococcal disease: a public health perspective. MMWR 1996; 45(No. RR-7):1-24.
2. California Morbidity. Neonatal Group B Streptococcal Disease: New Guidelines for Prevention. May 1997.
3. American College of Obstetricians and Gynecologists, Committee on Obstetric Practice. Prevention of group B streptococcal disease in newborns. ACOG Committee Opinion. June 1996;173:1-8.
4. American Academy of Pediatrics. Revised guidelines for prevention of early-onset group B streptococcal (GBS) infection. Pediatrics 1997;99:489-496.
5. *Guidelines for Perinatal Care*. 4th ed. Elk Grove Village, IL and Washington, DC: American Academy of Pediatrics and American College of Obstetricians and Gynecologists; 1997.

FIGURE 1. Strategy to prevent early-onset group B streptococcal (GBS) disease in neonates, using prenatal culture screening at 35-37 weeks' gestation.



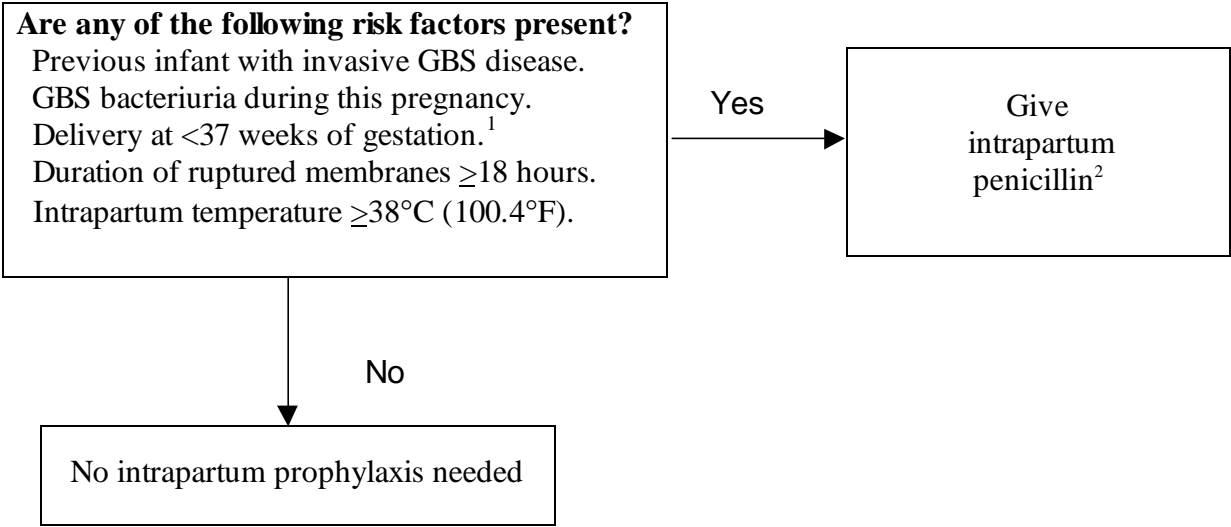
¹If membranes rupture at <37 weeks of gestation, and the mother has not begun labor, collect group B streptococcal culture and either a) administer antibiotics until cultures are completed and the results are negative or b) begin antibiotics only when positive cultures are available.

²No prophylaxis is needed if culture result at 35-37 weeks is known to be negative.

³Broad-spectrum antibiotics may be considered at the discretion of the physician, based on clinical indications.

⁴Actions should be taken to ensure that the results of cultures are available to appropriate personnel at the time of labor and delivery, including informing all women of culture results.

FIGURE 2. Strategy to prevent early-onset group B streptococcal (GBS) disease in neonates, using risk factors without prenatal culture screening.



¹If membranes rupture at <37 weeks of gestation, and the mother has not begun labor, collect group B streptococcal culture and either a) administer antibiotics until cultures are completed and the results are negative or b) begin antibiotics only when positive cultures are available.

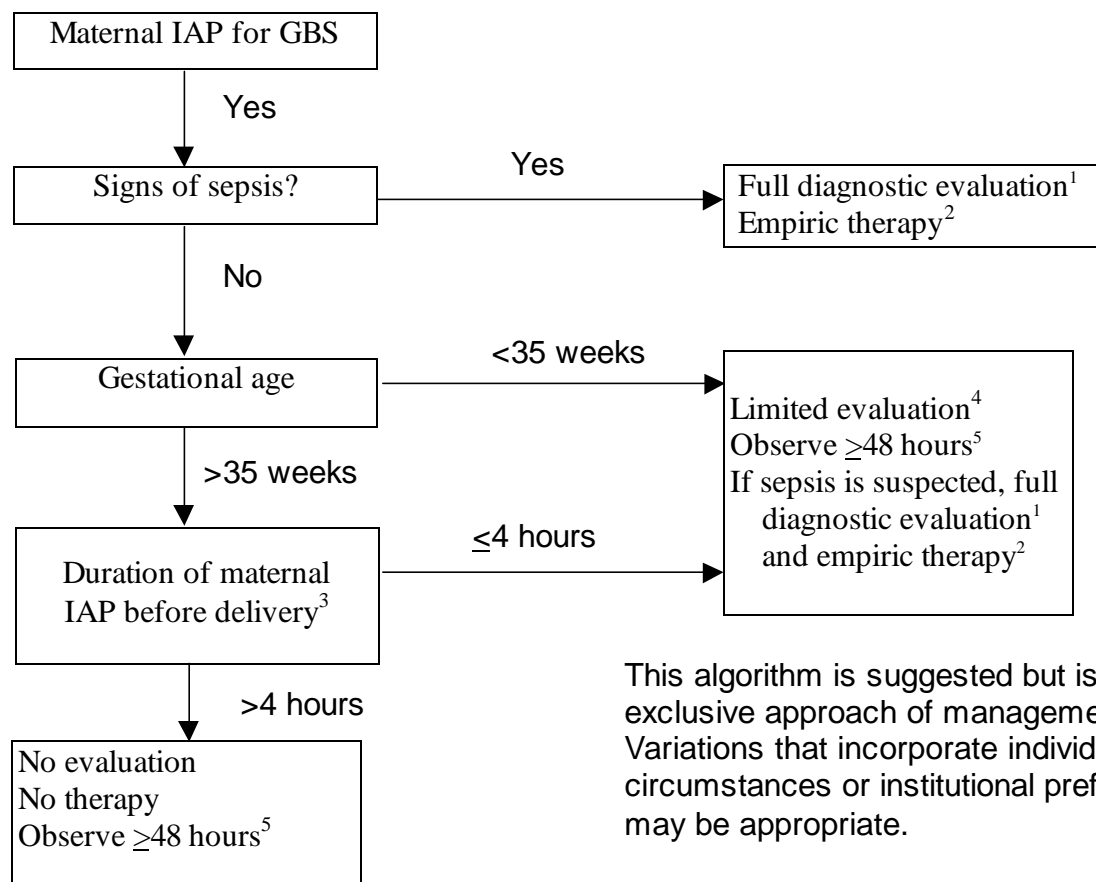
²Broad-spectrum antibiotics may be considered at the discretion of the physician, based on clinical indications.

TABLE 1. Procedure for collecting and processing clinical specimens for culture of group B streptococcus.

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| <ol style="list-style-type: none">1. Obtain one or two swabs of the vaginal introitus <u>and</u> anorectum. Cervical cultures are not acceptable; a speculum should <u>not</u> be used for culture collection.2. Place the swabs into a transport medium. The swabs in a transport medium will maintain GBS viability for up to 4 days at room temperature or under refrigeration. Appropriate nonnutritive moist swab transport systems (e.g., Amies[®]) are commercially available.3. Remove the swabs from the transport medium and inoculate both swabs together into <u>selective broth medium</u>. Todd-Hewitt broth supplemented with either colistin (10 µg/mL) and nalidixic acid (15 µg/mL) or with gentamicin (8 µg/mL) and nalidixic acid (15 µg/mL) may be used; appropriate commercially available options include Lim or SBM broth.4. Incubate selective broth for 18-24 hrs. Subculture the broth to sheep blood agar plate.5. Inspect and identify organisms suggestive of GBS (beta hemolytic or nonhemolytic, gram-positive and catalase negative). If GBS is not identified after incubation for 18-24 hrs on sheep blood agar plate, reincubate and inspect at 48 hrs to identify suspected organisms.6. Various slide agglutination tests or other tests for GBS antigen detection (e.g., genetic probe or fluorescent antibody) may be used for specific identification, or the CAMP test may be employed for presumptive identification. |
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TABLE 2. Recommended regimens for intrapartum antimicrobial prophylaxis for perinatal group B streptococcal disease.

Recommended:	Penicillin G, 5 mU IV load, then 2.5 mU IV every 4 hrs until delivery
Alternative:	Ampicillin, 2 g IV load, then 1 g IV every 4 hrs until delivery
If penicillin-allergic	
Recommended:	Clindamycin, 900 mg IV every 8 hrs until delivery
Alternative:	Erythromycin, 500 mg IV every 6 hrs until delivery

FIGURE 3. Strategy for management of a neonate born to a mother who received intrapartum antimicrobial prophylaxis (IAP) for prevention of early-onset group B streptococcal (GBS) disease.¹Includes CBC and differential, blood culture, and chest radiograph if respiratory symptoms.

A lumbar puncture is performed at the discretion of the physician.

²Duration of therapy will vary depending on results of blood culture and CSF findings (if obtained), as well as on the clinical course of the infant. If laboratory results are unremarkable, duration may be as short as 48-72 hours.³Applies to penicillin or ampicillin chemoprophylaxis.⁴CBC and differential, blood culture.⁵Does *not* allow for early discharge.